In the Specification:

Please DELETE paragraphs [0030] and [0033].

Please AMEND paragraphs [0013], [0014], [0026], [0031], [0032]. [0042], [0076], [0080] and [0083] where indicated below.

[0013] As a preferred additional feature, the current to current feedback transformer is also used for the capacitance neutralization. This can enable component count to be kept low. The values of inductances in the transformer can be tailored to enable both input matching (e.g. for noise), and capacitance neutralization together with the capacitor C_N, which enables the transformer to become dual purpose. The IM3 cancellation requirements depend on the input out-of-band terminations (baseband and second-harmonic termination). The noise and impedance match does depend on device scale and current, if base resistance is taken into account (Ref: The IM3 cancellation theory as discussed in M. P. van der Heijden, H. C. de Graaff, and L. C. N. de Vreede, "A Novel Frequency-Independent Third-Order Intermodulation Distortion Cancellation Technique for BJT Amplifiers," IEEE J. Solid-State Circuits, Vol. 37, No. 9, pp. 1176-1183, September 2002. and V. Aparin and C. Persico), however in the ideal case (rb=0) the optimum noise impedance is conjugate to the input impedance of the bipolar transistor for all current levels and device scales.

[0014] As a preferred additional feature, the current to current feedback transformer comprises a first inductor parallel coupled to an input of the amplifier, and a second inductor series coupled in an output path of the amplifier, the inductors being located to provide inductive mutual coupling. As a preferred additional feature, the circuitry for capacitance neutralization comprises a capacitor parallel coupled to the output path. The combination of current feedback transformer with a capacitor C_N at the output results in a frequency independent compensation of feedback capacitance.

[0026] FIG. 1 shows a prior art single ended amplifier~~simplified high frequency equivalent circuit diagram of a known BJT (Bipolar Junction Transistor)~~,

[0031] FIG. 5~~6~~ shows another embodiment being a differential current feedback amplifier with unilateralization and IM3-cancellation,

[0032] FIG. 6~~7~~ shows another embodiment being a differential voltage feedback amplifier with unilateralization and IM3-cancellation~~, and~~.

[0042] ~~FIG. 1 shows t~~The simplified high frequency equivalent circuit diagram of the BJT used in the description of all the embodiments of the invention. In this ~~figure~~ equivalent circuit:

[0076] ~~FIG. 5 shows~~ In another embodiment of the invention in which a voltage-feedback transformer is used together with a neutralization capacitance C_N, a resistance R_N, and a matching network at the input of the amplifier in order to set the requirements for IM3 cancellation.

[0080] Based on the single-ended current feedback topology in FIG. 3, a differential equivalent is shown in FIG. ~~6~~5. The primary windings of the current feedback transformers (L_1, and L_3) form part of an input transformer T_1, which allows differential-mode and common-mode signals to be treated separately. The secondary windings of the current feedback transformers (L_2 and L_4) can be connected to an output transformer T_2, which also allows differential-mode and common-mode signals to be treated separately. In this way there is orthogonality in the requirements for linearity and impedance match at the fundamental frequency for power, gain, or noise.

[0083] Based on the single-ended voltage feedback topology in FIG. ~~5~~4, a differential equivalent is shown in FIG. ~~7~~6. The secondary windings of the voltage feedback transformers (L_2, and L_4) form part of an output transformer T_2, which allows differential-mode and common-mode signals to be treated separately. The primary windings of the current feedback transformers (L_1, and L_3) can be connected to an input transformer T_1, which also allows differential-mode and common-mode signals to be treated separately. In this way there is orthogonality in the requirements for linearity and the match at the fundamental frequency for power, gain, or noise.